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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/778,079	02/07/2001	Wataru Kubo	P20277	4565

7055 7590 04/04/2003

GREENBLUM & BERNSTEIN, P.L.C.  
1950 ROLAND CLARKE PLACE  
RESTON, VA 20191

EXAMINER
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PSITOS, ARISTOTELIS M

ART UNIT	PAPER NUMBER
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2653

DATE MAILED: 04/04/2003

11

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/778,079

Applicant(s)

KUBO, WATARU

Examiner

Aristotelis M Psitos

Art Unit

2653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 February 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) all is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

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## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/6/03 and 1/10/03 have been entered.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

3. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention. Evidence that claim 3 fail(s) to correspond in scope with that which applicant(s) regard as the invention can be found in Paper No. 8 filed 1/10/03. In that paper, applicant has stated that claim 3 is a "product by process claim", and this statement indicates that the invention is different from what is defined in the claim(s) because claim 3 fails to conform with present US practice with respect to product by process claim(s) (format), i.e., the independent claim should be a process, and then the dependent claim is a product made by the above independent claim process, not the other way around as presented herein.

AS FAR AS THE CLAIMS RECITE POSITIVE LIMITATIONS THE FOLLOWING ART  
REJECTIONS ARE MADE.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

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The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1, 4, 5, 6, and 7 rejected under 35 U.S.C. 102(e) as being anticipated by Kiriki et al or under 35 USC 103 (a) as being obvious there over.

Under 102 considerations:

103/ With respect to claim 1, 4 and 6 Kiriki et al disclose a plano-convex objective lens – see figures 5, 8, 13, 14 and 15 and their description. The NA described meets the claimed limitation, as does the description of the wave front aberration. An outer flange is depicted in figure 19.

The Kiriki et al reference also discloses the use of such for MO systems; hence the examiner considers the limitation of claim 5, which includes the magnetic coil to be inherently present in the document.

Alternatively, under 103 considerations, the examiner would take Official notice of the use of magnetic coils for MO systems and their use with near field optical elements.

It would have been obvious to modify the base system of Kiriki et al and modify such with the ability of having a magnetic coil in order to have an MO near-field system.

The limitations of claim 7 fall with the parent claim, wave front aberration limitation.

If applicant can convince the examiner that the wave front aberration limitation is not present in the above document, the examiner would then present a further 103 rejection – see *In re Peterson*, 65 USPQ 2<sup>nd</sup> 1379, wherein the examiner would consider such values as being obvious optimization(s) of the disclosed Kiriki et al system.

#### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claim 1 above, and further in view of Official notice.

With respect to claim 2, the value of  $n$  is considered an obvious optimization of the value of  $n$  (given for example in Kiriki et al) – see col. 11 lines 40-50.

In keeping with *In re Peterson*, 65 ZUSPQ 2<sup>nd</sup> 1379 the examiner interprets the range of values for  $n$  to be merely an optimization of such and hence obvious to one of ordinary skill in the art.

With respect to claim 3, the use of glass to make lenses is considered well known – Official notice is taken thereof, and hence it would be obvious to one of ordinary skill in the art to manufacture the objective lens of Kiriki et al using glass as opposed to the use of plastic.

9. Claims 1,2, and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suda consider with Kashiwagi et al.

Suda disclose an objective lens (plano-convex) wherein the NA is in a range of .55 and the range for  $n$  (index of refraction) is within the range of claim 2 – see col. 4 lines 10-37.

Kashiwagi et al further teach in this environment the ability of a Numerical aperture value of at least .7 in order to obtain the desired recording densities.

It would have been obvious to modify the base system of Suda with the above teaching from Kashiwagi; motivation is to use the objective lens of Suda for recording of high-density discs.

The examiner concludes that the lens of Suda is made of glass.

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**Conclusion**

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

JP 02-101416 teaches variation in the value of  $n$  and its impact upon wave front aberration.

Kashiwagi et al discloses the particular impacts of having a NA greater than 0.7 in this environment.

Shikama et al and Yagi et al discuss the impact of the Marechal limit as measured in RMS values.

The above documents could be relied upon in support of the Official notice position(s) taken above in the rejections.

Any inquiries concerning missing papers/references, etc. must be directed to GROUP 2600 CUSTOMER SERVICES at (703) 306-0377.

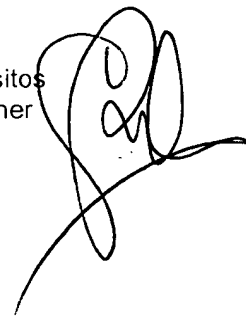
Any inquiry of a general nature or relating to the status of this application

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aristotelis M Psitos whose telephone number is (703) 308-1598. The examiner can normally be reached on M-Thursday 8 - 4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on (703) 305-6137. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

Aristotelis M Psitos  
Primary Examiner  
Art Unit 2653



AMP  
April 3, 2003